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### Learning Activity 4.1.

#### Psychotropic Medication Quiz

1. What is the mechanism of action by which antidepressant medications achieve the desired effect (regardless of the different physiological processes by which this action is accomplished)?

Antidepressants achieve the desired effect by increasing the concentration of norepinephrine, serotonin, and/or dopamine through a complex series of interactions in the body. Whether by blocking the re-uptake of neurotransmitters or blocking enzymes that inactivate.

2. For what must the nurse be on the alert with the client who is receiving antidepressant medication?  
Patients should be watched for suicidal thoughts. Mood swings and increased energy may have increased energy which could implement suicide plans.
3. As the nurse, when would you expect the client to begin showing signs of symptomatic relief after the initiation of antidepressant therapy?

Signs of improvement regardless of the medication should show within 2 weeks but take up to 4 weeks to show full therapeutic benefits.

4. Name an example of a tricyclic antidepressant Amitriptyline.  
Name an example of an MAOI Isoniazid.  
Name an example of an SSRI Fluoxetine.

5. Describe some common side effects and nursing implications for tricyclic antidepressants.

Generally only effective in 70% of patients. In addition, because all neurotransmitters bind to various receptor sites, increasing the availability of norepinephrine also has anticholinergic effects and increases the potential for postural hypotension. These side effects limit their usefulness in the elderly in those with cardiovascular problems.

6. Hypertensive Crisis is the most potentially life-threatening adverse effect of MAOIs. Symptoms for which the nurse and client must be on the alert include: occipital headache, increase in blood pressure, chest pain, and coma. What must be done to prevent these symptoms from occurring? (Your answer must include some examples.)

Ways to avoid this is by avoid foods high in tyramine food such as aged cheese or chocolate.

7. Lithium carbonate is commonly prescribed for bipolar mania. Many times when these individuals are started on lithium therapy, the physician also orders an antipsychotic medication. Why might he or she do so?

Lithium has a lag period of 7 to 10 days and antipsychotic provide immediate sedative effects. They also increase the levels of lithium so monitoring the blood levels in the initial phase of treatment is important.

8. There is a narrow margin between the therapeutic and toxic serum levels of lithium carbonate. What is the therapeutic range? List the initial signs and symptoms of lithium toxicity.

0.6-1.2 mEq/L. Too much lithium can be fatal. Early signs of toxic levels include vomiting and diarrhea (seen at 1.2 or greater mEq/L of lithium). At 1.5 mEq/L of lithium, increased GI effects (nausea, anorexia, diarrhea) and CNS effects (muscle weakness, drowsiness, ataxia, coarse tremor and muscle twitching occur. At blood levels of 2 mEq/L of lithium, increasing disorientation and seizures can occur. Blood levels of 3.5 mEq/L or higher are associated with coma, CV collapse, and death.

9. Describe some nursing implications for the client on lithium therapy.

Nurses should monitor the clients diet and have them be on a sodium restrictive diet. Nurses should instruct the patient to list all current medications and check for drug on drug interactions. Nurses should encourage adequate water intake from 2,000 mL - 3,000 mL and avoid activities that can result in excessive sweating and fluid loss. Pts should be instructed to monitor their lithium levels and have blood levels drawn 12 hours after their last dose. Big thing is patient education. Some patients may miss the "high" of their manic episodes and try to self adjust their dose or stop it all together. Patients should also expect weight gain.

10. What is the mechanism of action for anxiolytics (with the exception of buspirone)?

They depress sub cortical level of the central nervous system, particularly the limbic system and reticular formation. They may potentiate the effects of GABA in the brain (inhibiting excitation) and thereby producing a calming effect.

11. What is the most commonly used group of anxiolytics? Give two examples.

The most commonly used group is benzodiazepines. Two examples are diazepam (Valium) and lorazepam (Ativan).

12. What are the most common side effects of anxiolytics?

Drowsiness, confusion, and lethargy.

13. What must the client on long-term anxiolytic therapy be instructed in order to prevent a potentially life-threatening situation?

If the patient has any unusual bleeding, sore throat, fever, bruising hold the medication and contact HCP.

Patients should also be instructed to avoid alcohol, narcotics, antipsychotics, antidepressants, antihistamines, neuromuscular blocking agents, barbiturates, cimetidine, or disulfiram as these can increase anti-anxiety effects.

14. What is thought to be the mechanism of action that produces the desired effect with antipsychotic medications?

They block postsynaptic dopamine receptors in the basal ganglia, hypothalamus, limbic system, brainstem, and medulla.

15. Phenothiazines are an example of a “typical” antipsychotic group. Give two examples of phenothiazines and two examples of the newer “atypical” antipsychotics.

Two examples of atypical antipsychotics are aripiprazole and asenapine. Two examples of typical antipsychotic drugs are phenothiazines and haloperidol.

16. Describe potential adverse hormonal effects associated with antipsychotic therapy.

For males, they may see decreased libido, retrograde ejaculation, and gynecomastia. For females, amenorrhea and galactorrhea. These side effects can be challenging and a foundation for delusions.

Nurses should offer reassurance for these patients in this instance. If applicable, encourage patients to explore alternative treatments.

17. Agranulocytosis is a potentially very serious side effect of antipsychotic therapy. The nurse and client should be on the alert for symptoms of sore throat, fever, and malaise.

18. Neuroleptic malignant syndrome (NMS) is a rare but potentially fatal side effect of antipsychotic drugs.

List symptoms for which the nurse must be on the alert when assessing for NMS.

Fever, muscle rigidity, diaphoresis, tachycardia, and deteriorating mental status

19. Describe the symptoms of extrapyramidal side effects associated with antipsychotic therapy.

Akathisia (continuous restlessness and fidgeting), akinesia (absence or impaired voluntary movement), dystonia (involuntary muscle spasms in the face, arms, legs, and neck), oculogyric crisis (uncontrolled rolling back on the eyes in a symptom of acute dystonias and can be mistaken for seizure activity), pseudoparkinsonism (tremor, shuffling gait, drooling, rigidity), and tardive dyskinesia (bizarre facial and tongue movements, stiff neck, and difficulty swallowing).

20. What is the classification of medication that is commonly prescribed for drug-induced extrapyramidal reactions? Give two examples of these medications.

Valbenazine and deutetrabenazine are two medications used under the classification called vesicular monoamine transporter 2 inhibitors.

21. Describe a potentially life-threatening situation that could occur in the client who abruptly withdraws from long-term use of CNS stimulants.

The patient could have depression, suicidal thoughts, changes in vital signs, possibly flu like symptoms as well.



**This part is optional but encouraged!!**

**Homework Assignment Questions and Answers**

*Please read the chapter and answer the following questions:*

1. Identify three priority safety concerns for each class of psychotropic medications.

*Antianxiety Agents*

*Antipsychotics (novel)*

*Antipsychotics (phenothiazines and haloperidol)*

*MAO Inhibitors*

*SSNRIs*

*SSRIs*

